

Remarks

Claims 1-13 remain pending in this application after entry of this paper. Applicants believe that the invention is patentable.

Claims 1-2, 4-6, and 11-13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nissl (U.S. Patent No. 6,530,023) in view of Hartman (U.S. Patent No. 5,500,897).

The invention involves, as recited by claim 1, a trusted high stability time source for use with a digital time stamping service and a trusted external time source. The time source comprises a private time source indicating a private time, a published time source indicating a published time, and at least one power supply arranged to power the private time source and the published time source. The trusted high stability time source further comprises control logic programmed to perform a time stamping operation by receiving a message, appending the published time to the message to create a time stamp, and digitally signing the time stamp with a private key.

Specifically, claim 1 recites that the published time from the published time source of the trusted high stability time source is used for the time stamping operation.

Claim 1 further recites that the control logic is further programmed to perform a published time source update. The published time source update is performed by sending a request to the trusted external time source for a published time update and receiving a reply from the trusted external time source including the published time update. *The published time is updated with the published time update if an update condition is satisfied. As recited by claim 1, the update condition is based in part on a time difference between the private time and the published time update.*

Put another way, claim 1 specifically recites a trusted high stability time source including a private time source and a published time source. The published time source is used for time stamping operations. The published time update from the trusted external time source is used to update the published time when the update condition is satisfied which is based in part on a time difference between the private time and the published time update. *It is appreciated that the invention involves time stamping with a published time source yet taking into consideration the private time and the published time update when updating the published time.* This approach to implementing a trusted high stability time source overcomes certain problems in the prior art explained in the specification on page 1, lines 7-26.

Nissl does describe validating time of an internal source using an external source. The Examiner has drawn much attention to Nissl, column 7, lines 29-40 and Figure 7. Nissl describes updating the internal time source with the DCF 77 signal. Before updating the internal time source, an evaluation is conducted. Specifically, Nissl verifies that the DCF 77 signal is greater than the last valid received time signal. As well, Nissl verifies that excessive drift has not occurred given tolerance T.

In the end, however, Nissl describes a particular approach to updating an internal time source based on an external time source, where certain conditions must be met prior to proceeding with the update. There is no discussion of anything relating to the claimed invention as recited by claim 1. There is no suggestion of a trusted high stability time source involving a private time source, a published time source, when the published time source is used for time stamping operations, and wherein the update condition for updating the published time is based in part on the time difference between the private time and the published time update.

After all, Nissl only describes the updating of an internal time source. The Examiner refers to Nissl's device containing the last valid time signal t_E and states that this is the published time source. Applicants note that Nissl's storing of the last valid time signal is far different than the claim 1 recited published time source. After all, the published time

source in claim 1 is used for time stamping operations. In Nissl, the last valid time signal tE is not a time source that could be used for stamping but is only a particular time value.

For the reasons explained above, Nissl has a number of shortcomings that the Examiner has not acknowledged. In making the rejection, the Examiner does rely on Hartman as a secondary reference. However, the Examiner's reliance on Hartman only pertains to the concept of sending a request to the external time source for a time update. As explained above, Nissl has a number of additional shortcomings, and for these reasons, claim 1 is believed to be patentable. In further regard to Hartman, Hartman fails to address the deficiencies noted above with respect to Nissl.

Hartman does describe a client client/server-based secure timekeeping system. In Hartman, calibration and clock stability adjustment mechanisms which receive client clock calibration adjustment values and accuracy duration values are described. Nevertheless, the various aspects of the invention that have been explained above as not being present in Nissl are also not suggested by Hartman. Thus, there is no motivation to combine these references to achieve the claimed invention.

The remaining claims are dependent claims and are also believed to be patentable at least for the reasons given above.

Regarding claim 2, although Nissl does describe a PC plug-in card, claim 2 specifically recites that both the private time source and the published time source are mounted to the printed circuit board. Applicant reminds the Examiner that Nissl only describes an internal time source that is updated using an external source and fails to describe the public and private time sources of the invention, let alone describe the printed circuit board with these elements mounted thereon.

Regarding claims 4-6 and 11-13, these claims recite more detailed aspects of the updating procedure of the invention as well as a tamper proof enclosure. As explained above,

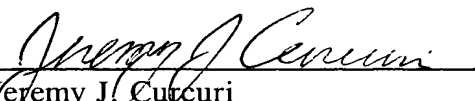
the prior art fails to suggest critical details of the procedure recited by base claim 1. Thus, there is no suggestion of combinations including more detailed aspects of the invention that pertain to the update procedure as recited in these dependent claims.

Claims 3 and 7-8 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Nissl in view of Hartman in further view of Esker (U.S. Patent No. 6,236,277). Esker describes a low deviation synchronization clock. There is no motivation to combine these references to achieve the claimed invention at least for the reasons given above with respect to claim 1. Esker does not overcome the deficiencies of Nissl and Hartman.

Claims 9-10 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Nissl in view of Hartman in further view of Watson (U.S. Patent No. 6,775,704). The dependent claims are also believed to be patentable at least for the reasons given above.

For reasons given above, claims 1-13 are believed to be patentable, and allowance of these claims is respectfully requested.

Respectfully submitted,
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